

Abstract

A minimally invasive apparatus and method for harvesting bone marrow cells, blood, and bone fragments includes a rigid cannula having a proximal end and a distal end with an opening. The distal end includes a cutting tip that is movable axially and radially to cut and disrupt bone tissue while preserving necessary viability among harvested marrow cells. The cannula further includes an inner surface defining an internal passage that extends from the opening toward the proximal end. Suction is applied to the passage to draw disrupted bone marrow cells, blood, and bone fragments into the internal passage for collection. The apparatus may include a rotatable shaft disposed co-axially within the internal passage. The shaft has a distal end with a cutting bit for further cutting and disrupting of bone tissue.